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AUTHOR Cowperthwaite, Gordon
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ABSTRACT

At Sinclair Community College (SCC) in Dayton, Ohio, a series of holistic education courses, called Education for Work/Life Actualization, was designed to offer students new skills for the development of self-esteem, empathy, creativity, intuition, centeredness, clarity of values, communication, nutrition, and preventative self-help health care. These courses were developed around several basic tenets of holistic education, including: (1) human potential is unlimited; (2) the function of education is the self-actualization of the individual; (3) enhanced self-awareness is critical to achieving potential; and (4) in a stressful, rapid change society, stability and health should be nurtured. Education for Work/Life Actualization is divided into a series of one-credit, experiential and interactive modules: Life/Career Focusing I and II, Pathways to Creative Power, Creating Your Own Health and Well-Being, Creating Rewarding Relationships, and Creating Your Own Actualization. This description of the Education for Work/Life Actualization includes an extensive review of the literature on holistic education, as well as information on the rationale for and development of the course sequence at SCC, the courses, and the methods and findings of a study conducted at the college to determine what effect the holistic education courses had upon adult students. Numerous tables illustrate the research data. (EJV)

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EDUCATING THE IMAGINATION

Gordon Cowperthwaite
Professor
Sinclair Community College
Dayton, Ohio

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Models of holistic education, focusing upon individual differences and self-image, can add meaning to learning and enrich tomorrow's curriculum.

Educating the Imagination

In The Aquarian Conspiracy (1976), Marilyn Ferguson talks about the great learning disability in our culture: "an educational system that emphasizes 'right' at the expense of being open" (p. 280). It is paradoxical, she maintains, that our brain, so capable of exquisite transcendency, also is susceptible to training which is self-limiting. This susceptibility is both the bane and the glory of man; for to be susceptible also infers the possibility of an awareness of the best fruits of imagination and reason.

The holistic approach to education is sensitive to this issue which might be termed the **self-limiting** prophecy. Therefore, it tries to examine the different kinds of interactions and behaviors that shape the total person, believing that the function of education is the self-actualization of the individual. In simpler terms, this means that education should help the person realize more fully who he or she really is. In its highest sense, it is a process of being and becoming.

At Sinclair Community College, we believe in these ideals and so in 1980 we created a series of holistic education courses designed to offer new skills for the development of self-esteem, empathy, creativity, intuition, centeredness, clarity of values, communication, nutrition, and preventative

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self-help health care. Holistic education, therefore, becomes education for living and coping with life in an advance technological society where rapid change is a constant and where stability and health must be nurtured within each person. Self-awareness, then, is the crucial journey. To reach these goals, our educational system needs first to recognize its deficiencies and find the courage to change.

What is wrong with an educational system which, despite hordes of flailing critics, cannot reasonably be called a "failure?" The polarity of failure is success and for those lucky few who persist in seeking the widest spectrum of learning, their experiences with formal education apparently are successful ones. But what of the others? Has their education been a failure? Words like failure and success are narrowly self-contained and heavily ladened with the judgement of society and add no shades of grey to the palette. To succeed is to pass a course; to score in the upper fourth of one's class; to receive a degree. To fail is to get and F on an exam; to be scorned by one's more "successful" classmates as a dullard; to drop out of school because of an abused and bruised self-concept that often persists throughout life like a chronic virus. The very young carry the imprint and the expectations of their parents into almost every experience. Different goals and values learned in the formative years accompany each child into his or her first day in school. This individuality, this diversity and differentiation is exposed to the leavening process of what Ivan Illich (1972) calls enforced instruction, a practice "...which deadens for most people the will for independent learning" (p. 263). Teachers working with the common denominators of the system and the structure often have no choice but to provide common numerators which create educational fractions equalling one. That this is not necessarily willful on their part in no way constitutes a defense of the practice. It is expedient and it is the product of an educational system which attempts to teach the largest number of students with the most cost-effective teacher-student ratios. It is economics as much as it is pedantics. Public mass education was never designed to concern itself with bicameral brain integration; to encourage intuition and imagination; to exalt meaning over memorization; nor to be holistically encompassing.

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Unfortunately, historical context is no longer a useable reference to explain and justify an educational/societal crisis. Again, let me refer to Marilyn Ferguson's The Aquarian Conspiracy and her point about a cultural awakening. She feels that eventually every society comes to a place where its old avenues of behavior are blocked. Old precedents don't seem to work; a reshuffling of the elements of the old paradigm only produces a series of unhappy events which create more crisis and palliation. We find ourselves living in a world of excuses. Nothing seems to work as well as it did. In the words of the old song: "Things Ain't What They Used to Be."

At this point people known as the "New Lights" show up on the scene with alternatives to the old ways that are blocked, and society, out of need, is ready to listen. Inevitably there is a blacklash called the "nativist tradition." These people advocate a return to the past, to go back to the "ways of the fathers" in order to remove the problems which block our paths. The "nativists" get their hearing, but they do not succeed because times have changed so inexorably that the old solutions simply will not work anymore and the level of cynicism is so high in society that the old prophets are clouded in suspicion. Because the climate is ripe, the way is open for change. We are at this point in our today. The question becomes: will we create new paradigms or will we just rework the old ones?

Translate this into the context of education and you have the following statement excerpted from the Holistic Education Network Newsletter, July 1980:

> As the education system has become bigger, more cumbersome, less fitted to the changing needs and values of our society, the educational achievements and the satisfaction of the teachers have both deteriorated rapidly. Now hails the 'New Lights,' humanistic, confluent, transpersonal, new age educators with new solutions asking for a chance to try out and develop their approaches. They are counteracted by the 'Moral Majority' and 'fundamentalist' who have a different view of things and assert their will. More attention is consequently given to the basics but nationwide achievement tests show that scores on the basics are decreasing. In the meantime the 'New Lights' are developing further their knowledge and skills and gathering their evidence. Their time, our time, cannot be far off.

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In discussing the fact that neither he nor anyone else he knows is a genius, Buckminster Fuller said poignantly: "some of us are just less damaged than others" (as cited in The Aquarian Conspiracy, (p. 284). This is a compelling indictment of schooling. Ivan Illich decries the fact that knowledge "...treated as a commodity delivered in packages, and accepted as private property once it is acquired must always be scarce" (as cited by Vermilye in The Expanded Campus, p. 263).

Illich believes that "deschooling" is inevitable because schools impoverish individuals rather than enrich them; that education as we experience it reinforces the inequities of class structure. According to Illich, schools ignore individual differences and focus on standardized norms; they discourage creativity and foster imitativeness and fear. And finally, schools favor the abstract over the concrete. "Equal educational opportunity is, indeed, both a desirable and a feasible good, but to equate this with obligatory schooling is to confuse salvation with the Church" (1972, p. 15). If this disestablishment is imperative and impending, what is to fill the vacuum; what are the fundamental alternatives which must supplant an anachronism? Illich says that we must distinguish between schooling and learning which, he says, means "...separating the humanistic goals of the teacher from the impact of the invariant structure of the school" (as cited by Vermilye in The Expanded Campus, p. 264). To applaud such a statement does little to change the system. Schools tend to be entrenched bureaucracies and academics too often enshrine rigidity under the rubric of academic freedom or other nomenclature. But a subtle shift in perspective which would let educators look at those they serve as "clientele" instead of as "students" might provide clues about competition and what currently reflects a growing consumer movement concerning American higher education and its procrustean outlook. There is little external pressure for change when the bureaucracy neither runs for office nor competes daily in the marketplace. As Ferguson reports of a survey of educators, they are by their own admission "in peaceful struggle" within the system (p. 280). Mario Fantini, former Ford Motor Company consultant on education, stated bluntly: "The psychology of becoming has to be

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smuggled into the school" (as cited in The Aquarian Conspiracy, p. 281)

Another strong force for change, according to Ferguson, is crisis. The failures in education have clearly sounded a crisis signal which calls for a new synthesis; in other words, it is no longer acceptable nor wise to wait patiently for a return of the pendulum as has been the habit. What is needed is a paradigm change, a reconstructed model designed to humanize education by adding meaning to learning; one which will be concerned with the building of self-image and imagination as bedrock conditions of educational growth.

The heretical idea of deschooling evokes cries of "madness" from many traditional educators regardless of stripe. They fear that such a condition would not bring clarity of educational goals, but would produce chaos. Illich would parry that criticism, I believe, with the thought that actually, it is not literal deschooling which he is in truth proposing, (the discarding of all of the current structure), but a critical and open-minded look at what the scientific literature indicates so clearly: the unnatural quality of many of our educational methods and why they work so poorly, if at all. Illich calls this unnatural quality "the hidden curriculum."

> This hidden structure constitutes a course of instruction which stays forever beyond the control of the teacher and his school board. It conveys indelibly the message that only through schooling can an individual prepare himself for adulthood in society, that what is learned outside of school is not worth knowing. I call it the hidden curriculum of schooling because it constitutes the unalterable framework of the system within which all changes in the curriculum are made (as cited by Vermilye in The Expanded Campus, p. 264).

Illich's premise is supported by Ian Lister (1972). He refers to Illich's hidden curriculum and provides what he terms some messages of the hidden curriculum (p. 92):

1. Schooling and education are the same thing.
2. The world is not-educational; the school is unworldly.
3. Learning is the result of teaching.

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4. Economically esteemed knowledge is the result of professional teaching.

5. Learning is mastery of the curriculum. The curriculum is a commodity. Schools and teachers package and sell that commodity.

6. Knowledge is divided into packages (subjects/topics). Learning is linear - knowledge comes in sequential curricula and graded exercises. (Curriculum reform is the filling of the curriculum with new packaged courses).

7. Specialized knowledge is the kind which is most highly esteemed.

8. Other people make all the decisions. (You must accept 'the environment'. You cannot influence - never mind change - it).

9. Life is a zero-sum game in which individuals and countries compete for scarce resources (university places, petroleum). One man's/one country's gain is another man's/country's loss. Competition, not cooperation, is the essence of 'life,' and is therefore 'natural.'

10. There is a phase of a person's life when he/she is at 'school age.' Education ends when schooling ends. In order to get more education we must therefore raise the school-leaving age.

Lister ends his article with this statement and question (p. 93):

Statement: Curriculum reform which involves real change, rather than a reshuffle of the old parts, clearly must involve a change in the hidden curriculum.

Question: Can a change in the hidden curriculum be achieved without putting in its place a new hidden curriculum, as insidious and as riddled with contradictions between itself and our social aspirations as the one we have at present?

John Dewey strongly favored integrating what he called "extra"-curricula activities into the regular curriculum of the school. These extra activities included learning from the ambient environment and bringing that learning into the classroom. He felt that education could not be separated from life, nor could life be excluded from education. This integration; this wholism produced knowing which reorganized activity. Experience, according to Dewey, was the foundation of all learning. Thus the total individual and the total experience of that individual were involved in the educational process.

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What is curious about modern education is that there is little argument with the proposal that elements of the 'outside' world be infused into the classroom to provide an enriching experience for the students. Guest lecturers, co-op education, faculty internships in industry, and the like, are usually supported and encouraged. But when, for example, a course in interpersonal competence is proposed (or worse yet, it is suggested as a theme for a faculty-development workshop) doors slam and shades are dropped.

However, William R. Tobert (1981) states that interest in learning that relates to the interpersonal experience of students (i.e., learning which does not just relate directly to their analytical and intellectual competence) seems to be gaining currency. He gives several reasons for this (p. 172):

> 1. ...the population seeking postsecondary education is growing older, and older students are more motivated to learn when learning is related to practical interactional problems.
>
> 2. The 'practical' divisions of higher education - the professional schools and continuing education departments - are growing most rapidly.
>
> 3. ...with the increasing turbulence for change and the destruction of unquestioned sources and patterns of authority, people are finding their interpersonal relationships less regulated by habit or tradition and increasingly more fragile - forming and dissolving in ways that seem difficult to control. They may thus be painfully aware that there is something about human relationships they do not understand and need to learn.
>
> 4. A fourth reason relates to ego development ...which indicates that the developmental level of people seeking higher education is rising. Since people at higher ego levels increasing assume personal responsibility for the social dilemma in which they find themselves, rather than externalizing blame onto others, this change may also be contributing to an increasing interest in learning how one's own actions affect interpersonal situations.
>
> 5. Finally, academics in general and social scientists in particular have been focusing more sharply on the gaps between intellectual analysis and interactional realities in an attempt to explain the failures of social policies, institutional reforms, and leadership strategies (Argyris and Schon, 1974; Cohen and Lindblom, 1979).

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Tobert concludes that there is a substantially more sophisticated method of knowing and learning than the historical ideal of formal academic inquiry. He calls this "living inquiry," or "inquiring interpersonal strategy." Argyris and Schon (1974), who developed this model, make the point that the more teachers use their position to encourage an inquiring interpersonal strategy, the more the environment of the class will become "self-correcting rather than self-sealing" (p. 177).

Foa (1977) in his chapter, Education as Art, talks about the education of imagination as a counterthrust to the current tendency of turning the art of teaching into the "mastery of technology and bureaucracy" (p. 215).

> What gives any form its clarity, power, and attractiveness is its 'quality' or style, and herein lies the difference between that which just exists (whether in education, art, or in human personality) and that which projects itself with untold possibilities, which evokes responses from its audience, directly and effectively (p. 210).

Foa believes that if holistic higher education is to become art, the need is to infuse the sense and practice of style into the entire institution: teacher, student, and administration. The education of imagination tends to discount "...sterile meaningless forms within a discipline or within an entire institutional structure,..." (p. 211). Training provides what Foa calls "automated competency" (p. 211), but never vision or style. It is only the imagination with its colorful scope and unending capacity for shifting and restructuring information which provide a "clean, free sweep across varied entities to arrive at a single integrated creation, ..." (p. 211).

In a large percentage of our colleges and universities the education of the imagination is found only in the art/performing arts departments and in the creative writing courses scattered through the English curriculum. Foa continues:

> If imagination allows us to uniquely actualize ourselves, rather than to passively tolerate the technological and bureaucratic society, then it is the basis of all individuation. And if, simultaneously, it nurtures 'the concept of responsibility,' then it is also the basis of our involvement with other individuals and with society as a whole (p. 212).

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The difference between an educated and an uneducated person, as Nevitt Sanford has pointed out, is that an educated person can "work out conflicts and express inner needs in societally acceptable ways via imagination, using symbols and myths of that society" (p. 10). Creative teaching always involves artistic activity because it is the process of imaginative restructuring of material to provide students with new relationships. This is quite different from authoritarian presentation of material which demands attention of the moment (and memorization) often at the sacrifice of learning relevancy. Learning relevancy is closely related to what Cross (1981) describes as reasons why adults learn: "The reasons people give for learning correspond consistently and logically to the life situation of the respondents" (p. 91). Life situations, far from being abstract, are constant reminders of one's position in the human condition. And education which helps clarify one's current position and provides a bridge of understanding to the future will be considered nurturing and important.

> Attitudes toward education arise directly from the learner's own past experience and indirectly from attitudes and experiences of friends and 'significant others.' Adults who hated school as children, in part at least because they were constantly placed in a competitive situation where they did not do well, are unlikely to return voluntarily to the scene of their former embarrassment (p. 126).

Further criticism of education training is presented by Fox when he describes the experience of student teachers in education schools being taught "all the miniscule steps involved in 'Instructional Design,' 'Audio-Visual Aids' and ways to measure reading abilities, in courses whose combined significant content could be condensed between the pages of one book. Yet they are left to their own devices in the areas of sensitivity to students, artistry in the classroom situation, interaction with community to realise community (rather than state boards of education) needs, and their own vitally important personal development as human beings" (p. 215).

The result of this, Fox implies, is that many students who enter education schools still possessed of independence, imagination, and a trust

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in their personal effectiveness, drop out because of the oppression of their freshness and spirit by the autocratic, bureaucratic, rote, and unimaginative posturing of the faculty. I suggest that Illich would approve of a form of deschooling inherent in a program developed by Maurice Gibbons called the Walkabout. This program presents students with a series of challenges, imaginative problem solving, experiential learning, values clarification, and the chance to have personal influence over the construct of their education, which is to say influence over their own growth. Gibbons (1974) describes five categories in the program which he says will help demonstrate the most specific needs for knowledge. They are:

> 1. Adventure: a challenge to the student's daring, endurance, and skill in an unfamiliar environment.
>
> 2. Creativity: a challenge to explore, cultivate, and express his own imagination in some aesthetically pleasing form.
>
> 3. Service: a challenge to identify a human need for assistance and provide it; to express caring without expectation of reward.
>
> 4. Practical Skill: a challenge to explore a utilitarian activity, to learn the knowledge and skills necessary to work in that field, and to produce something of use.
>
> 5. Logical Inquiry: a challenge to explore one's curiosity, to formulate a question or problem of personal importance, and to pursue an answer or solution systematically and, wherever appropriate, by investigation (p. 599).

Illich's approval would be sharply rebuked, I believe, by the expected criticism that these categories do not reflect what most people see as the heart of higher education: learning based upon "rigorous" (?) intellectual pursuit. But this paradigm produces what I might term useful education and most relevant to lifelong learning which I define as the development of curiosity and the nurturing of imagination as a mediator of that curiosity. In Gibbon's sense, to "deschool" means the following:

> If we remove the structure of subjects, discipline, courses, lectures, texts, and tests, it is essential that we develop superstructures which will support the student's efforts to create a structure of his own. Autonomy, life maturity, is not a gift, but an accomplishment of youth, and a difficult one to attain (p. 600).

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The Walkabout program educates the student to develop individuation, or the definition of entity; community involvement, or connection with the roots in one's own society.

Chickering (1974) theorized that all adults pass through certain common culture-bound stages, a psychosocial theory which concerns itself with content. College students characteristically confront seven major "vectors of development" which Chickering defines as 1) developing competence; 2) managing emotions; 3) developing autonomy; 4) establishing identity; 5) freeing interpersonal relationships; 6) developing purpose; and 7) developing integrity (p. 8-17). Affecting these vectors are institutional environmental conditions which tend to either foster or inhibit them. What is important here is Chickering's belief that change or development occurs when a balance is struck between the personality of the students and the challenge and support which they find in the learning environment. If one subscribes to the Maslovian theory that there is a natural movement toward self-actualization when one is given a supportive environment which allows maximum freedom to determine direction, then it seems logical to assume that those college environments which foster self-determination will tend to produce students with higher self-concepts.

Rich (1975) in describing various failures in education suggests a new approach to the understanding of the student. He postulates an ideographic approach to educational research which looks at the different kinds of interactions and behaviors that shape the total person. Ideograph is a word relating to the concrete, individual, or unique. He further states that these failures cannot be ascribed to poor scientific behavioral research as much as they can be blamed upon the inability of teachers and administrators to relate to students as human beings and to understand them as total persons. He adds:

> A basic characteristic of the ideographic holistic approach is that it studies the person as a whole. As with Buber's 'I-Thou' relationship (1958), the teacher treats the students as one capable of entering into a relationship bound by mutuality. It is a direct and intense mutual relationship in which one meets the 'other' as genuinely different from oneself, but as someone with whom one can enter into an active

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relationship (p. 330).

Because the scientific behavioral model of research probes people as objects, it is examining only external behavior and searching for common denominators and uniformities representing a whole class rather than factors which are unique to the person. Rich's premise, therefore, is that the ideographic holistic mode of thinking leads to the teacher's understanding of individual differences and promotes greater sensitivity toward the uniqueness of each student.

Ideographic holistic thinking, according to Rich, lets the teacher prepare an environment which promotes "transcendence through the integration of new experiences and ideas," (p. 332) and helps students improve self-concept and self-mastery, thus assuming increasing responsibility for their own education.

Chickering's work at Empire State College which involved adult development (ego development, intellectual development, and ethical development) and the life cycle provides a clearer view of how students learn, both in terms of how they understand themselves and in terms of faculty appreciation of different learning styles. Chickering asks the question: "can we increase our capacity to recognize and act upon individual differences more effectively - both as an institution in terms of developing alternatives and resources and as individual mentors and administrators in terms of working directly with students?" he answers "I think we can. Research and theory concerning the major areas and stages of adult development is a good place to start. This approach is useful because 1) it identifies significant areas of individual differences; 2) it describes major dimensions of learning and development important to college students; and 3) it has powerful implications for students' education motives, orientations toward knowledge, teaching practices, approaches to evaluation, and student-faculty relationships" (1976, p. 5).

Sadker and Sadker (1977) argue that the classroom can foster learning on such personal and affective issues as self-competency, self-understanding, and peer reaction even though there are many unanswered

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questions surrounding this approach. A major question concerning affective education of students is how much are teachers being influenced by the model being taught? Buffington and Stilwell (1980); Buffington and Stilwell (in press) discovered that indeed teachers are influenced by the models they teach and in the case of affective models, "teachers were beginning to assimilate many of the affective ideas they were presenting" (p. 176). Such changes in attitudes toward their students continued to develop as the programs progressed.

One interesting result of the research experiment by Buffington and Stilwell is that "on the average, male students are given four more positive ratings on the posttests than on pretests across treatments. There virtually were no changes in the total number of female positive ratings on pre- and post-assessment" (p. 177). Additional research by Barclay (1974); Bourrier (1977); Kagan and Lang (1978); Leinhardt, Seewald and Engel (1979); Sexton (1969); indicates that teachers tend to rate females more positively than they do males (as cited by Buffington and Stilwell, p. 178). The Buffington and Stilwell study corroborates these findings, but reveals another interesting bit of data: As a result of the affective teaching given teachers, the margin is narrowed considerably. What can be concluded from this research?

> Craig and Garcia (1978) point out that as student behavior improves, daily teacher ratings increase moderately, and teacher vocalization in response to appropriate child behavior increases. Applied to this affective education study, this finding suggests that as teachers become more cognizant of their students from a 'feeling' perspective, behavior becomes more understandable. As a result, their attitudes toward students change. One explanation is that affective education prompts teacher attitudinal change, thus making the teacher aware of student's personal needs. Students likely respond, thus promoting a cycle of increased awareness and better rapport (as cited by Buffington and Stilwell, p. 179).

Purkey (1970) indicates that there may be a significant relationship among variables of teacher personality and student outcomes. Granted that the idea of self-concept is somewhat nebulous, many psychologists and educators would agree that this concept which defines how teachers feel about themselves, first as persons and then as educators, is a vital

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additive, especially in the early grades, if students are to develop a healthy personality. Tonelson (1981) states:

> It appears that much of the available research regards self-concept as a unitary variable. Perhaps it would be more advantageous to divide self-concept into a number of lesser concepts which synergistically combine to form the whole self. Some of the variables of self-concept which have been studied previously are: self-esteem (Butler and Haigh, 1961), (Coppersmith, 1959); competence (White, 1959); self-acceptance (Berger, 1952), (Phillips, 1951), (Bills, 1951); and the congruence between a person's perceived real and ideal selves (Worchel, 1957), (Bills, 1951) (p. 97).

Much of the literature in this area indicates that unless a teacher understands him or herself, he or she cannot begin to understand his or her students, nor will the students be able to understand them. If the teacher is not involved in this self-study, he or she will continue to look upon students through the lens of their own biases. This ineluctably distorts the teaching process because of their own anxieties about themselves, which are unrecognized and therefore not dealt in a way which clears the vision.

Jersile (1955) states it this way: "it is only though the teacher's understanding and acceptance of himself that he is able to facilitate the process of students getting to know themselves and to allow them to gain healthy attitudes of self-acceptance," (as cited by Tonelson, 1981, p. 96). Tonselson, says that in order for an individual to have a positive view of self, there "must be congruence between his perceived and ideals solves" (p. 97). Rogers (1951) underscores the importance of this thought when he says: "The individual whose self-concept is incongruent with reality may be vulnerable and this discrepancy is a measure of internal tension, which determines the amount of defensive behavior" (as cited by Tonelson, 1981, p. 97). Rogers (1974) defines what it means to learn as a whole person as follows: "I would say that it involves learning of a unified sort, and the cognitive, feeling and gut level with a clear awareness of the different aspects of the unified learning" (p. 104).

It should come as no surprise to observant university college administrations that a large cluster of potential adult students stand

restless and tentative just beyond the fringe of the campus. They stand motionless because they are unwilling to risk a traditional setting. There are good reasons for this lack of adventure: a history of disappointment and failure with traditional education and its structure (now stereotyped as "more of the same"); an unfounded anxiety about "competing" with younger students; the prospect of dragging-out education over many years because of the necessity of locking into college schedules and college classrooms. In short, it is a story of how traditional program structure and delivery fail to meet the needs of many adults because the System simply is not interested in them except on its own terms. Evening and Saturday classes, even Sunday classes, are not changes in delivery basic enough to create a strong magnet capable of overcoming the steely inertia of many self-directing adults who want, but don't find, the promise of a college education which is compatible with their learning styles and life-styles; tailored to their needs and aspirations.

A survey by Patrick R. Penland (1977) for the U.S. Office of Education shows that four out of every five adult Americans are involved in "self-planned instruction." Mr. Penland, who is Professor of Education and Library Science at the University of Pittsburg, feels that a true learning society is at hand. "A great many people are concerned about setting their learning pace and exploring their own styles of learning," he says (as cited by Cross in "The Adult Learner," p. 5).

The survey indicates that most of these adult learners are not interested in enrolling in traditional modes of education. Interestingly enough, most of the adults surveyed prefer to study at home, although on-the-job training also ranks high as an option. Mr. Penland pictures these adult learners as "a mass of individualists who tend to be anti-establishment." The survey shows that adults make use of a wide range of community learning resources, recognizing, it seems, that significant and "legitimate" learning occurs in ways and places beyond the campus. The Penland study confirms, therefore, what many educators are now beginning to consider seriously: that adult learners want flexible time and space learning opportunities keyed to the learning styles that reflect their

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individual differences. What this says, simply, is that many adult students want more control over the learning process and will choose proactive, self-directing learning over passive classroom instruction.

According to K. Patricia Cross (1978) a characteristic of adult learners that distinguishes them from children is their reservoir of experiences. New learning for adults has to be incorporated into an existing framework of learning and experience. Adults do not come to school with a blank slate waiting for it to be filled by teachers. They want to know how new knowledge relates to their own thoughts and experiences" (as cited by Cross in "The Adult Learner," p. 6).

> The range of adult interest is very great, and it is difficult to present a statistical profile of the 'the' adult learner. Furthermore, there is a danger of deriving a simplistic profile from the statistics of market surveys. A simplistic profile would indicate that the largest number of adults are quite traditional in their educational preferences. Classes and lectures, for example, are the most popular teaching methods, with one-fourth to one-third of survey respondents favoring traditional classes. Don't lose sight of the fact, however, that the same statistics mean that from two-thirds to three-quarters of the adult learners prefer some approach to learning other than the ubiquitous lecture (Cross and Zusman 1977, as cited by Cross in "The Adult Learner," p. 6) Emphasis added.

Studies by Allen Tough indicate that when adults go about learning in a natural way (as contrasted to being taught) they become highly self-directing. In traditional education, the teacher structures the learning. Structure when imposed, conflicts with the adult learner's deep psychological need to exhibit self-direction in the process of understanding needs, selecting resources, identifying strategies, and designing evaluation.

What you can do, Tough says, is "Become committed to fostering the entire range of major learning efforts. Feel a kinship with the helping enterprise devoted to facilitating persons' efforts to learn and grow. Feel part of an even wider enterprise to foster human, loving, liberating, growth-enhancing creative elements in our society. In your program or institution, be sure learners have plenty of freedom and options" (p. 16):

> Provide a variety of opportunities and resources for learning and personal growth.

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> Be sure people can get plenty of information about these opportunities and resources.
>
> Encourage autonomous groups of peers ('self-help groups') to form around a common interest and or need.
>
> As much as possible give learners a wide choice of how and what to learn; simultaneously be sure they can get enough help (Tough 1978, p. 16)

Because all journeys start with a first step, however tentative, new age educators ("New Lights," if you will) are appearing in growing numbers anxious to challenge the old ways. Not willing to wait patiently for a "pendulum swing," they are creating new paradigms, as Marilyn Ferguson implores, to confront an educational malaise with a variety of humanistic, confluent, and holistic programs designed to engage the whole person in the learning process. These programs offer alternatives to the traditional practice of educating only the logical, linear, left brain functions. These alternative do more than simply bridge the gap between cognitive and affect. Such holistic techniques involve mind, body, spirit, and social consciousness in ways which engage imagination leading to positive self-image and the courage to move ahead into the future.

Holistic Eduction at Sinclair Community College

One such journey has begun at Sinclair Community College in Dayton, Ohio. In March, 1980, The Work/Life Actualization Task Force was formed to begin implementing an idea advanced by Dr. Barry Heermann, Project Director of Experienced Based Education at Sinclair. The idea, soon to become a credo, reflects the belief that higher education in this country is essentially lopsided. Traditional education, with its emphasis on left-brain functioning; i.e., the ability to use logic, to reason, and to verbalize, has for the most part ignored intuition, creativity, and the engagement of imagination in learning and problem solving. Scientists tell us that the result of such a skew to the left, as it were, denies all of us the flowering of our full potential.

Humanistic/confluent education has brought us closer to the ideal, especially with the focus on value clarification which helps students arrange

the components of their lives and then prioritize their meaning. To take it one step further, Dr. Heermann proposed an holistic education curriculum which would begin to address the problem of striking a "balance of the rational and the intuitive modes of consciousness, thus enriching adult life transitions" (1980, p. 1). Dr. Heermann continues:

> The problem has been that essential affective learning, so critical to adult life transition, in the realm of value clarification, goal-setting, self-awareness, healthful living, interpersonal effectiveness, and life/career exploration is not practiced in most institutions as a counterpart to their mainline instructional delivery focused on cognitive development (p. 1).

Education for Work/Life Actualization

In response to the recognized problem, a series of one-credit courses called Education for Work/Life Actualization were created at Sinclair. The course content was developed around several basis tenets of holistic education. Heermann describes them as follows:

1. Human potential is unlimited and capable of extended ranges of perception and understanding,

2. The function of education is the self-actualization of the individual,

3. An enhanced level of self-awareness is critical to the process of achieving one's potential,

4. In an advanced technological society where rapid change and stressful living is a constant, stability and health should be nurtured within each person,

5. In order to achieve those things necessary for us to be physically, mentally, spiritually, and socially healthy, education needs to include new skills for the development of self-esteem, empathy, creativity, intuition, clarity of values, communication, nutrition, and preventative self-health care (p. 3)

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Sinclair Community College Catalog Entry:

> Education for Work/Life Actualization
>
> The Work/Life Actualization course sequence has as its focus the nurturing of adult learners in their pursuit of fulfilling work/life experience, consistent with the achievement of their highest potential. An underlying principle of this course is that the potential to find one's unique purpose and meaning in life and work hinges on one's wholeness or completeness as a human being. To that end the course emphasizes the development of interpersonal processes (how to experience, accept, and express emotion); the development of physical/sensory processes (how to maintain a healthy body, developing manual skills, reducing stress); the development of intellectual processes (how to think in an original, constructive, and creative fashion using inquiry skills); and the development of the imaginative processes (how to contact, value, and use our intuitive skills). The course is divided into a series of one-credit modules: Life Focusing I and II, Pathways to Creative Power, Creating Your Own Health and Well-Being, Creating Rewarding Relationships, and Managing Stress.

Holistic Education Task Force

The organizational process for Sinclair's Work/Life Actualization curriculum began with the creation of the Holistic Education Task Force composed of thirteen interested faculty members representing business, fine arts, allied health, general studies, public services, engineering, and student services. I was asked to serve as an ex officio member to direct a research study designed, in effect, to test the efficacy of the rational for the program and specifically to measure the effectiveness of each module.

At this point, it is important to make clear that holistic education at Sinclair is not in opposition to traditional education. Many traditional faculty serve on the Task Force. No attempt is being made to make holistic education insular. What is being done, however, is to place traditional education in a new context. Education then becomes education for living: education which helps students find meaning and purpose in life through opening up pathways to undreamed of potential. It supplements and supports traditional education as well as rounding it out.

A proposal was submitted to the College administration from the Office of Experience Based Education in March of 1980. Two excerpts are reproduced here:

Proposal:

> That a sequence of a half-dozen one-credit modules, referred to in this proposal as Life/Work Actualization modules, inclusive of life and career exploration, mind/body health, value clarification, healthful living, interpersonal development, etc., be developed and delivered at Sinclair Community College;
>
> That the proposed credit sequence be adapted to older and younger students organized into 'core' groups (i.e., a diverse group of students who are linked together by this course and are reunited each quarter, stimulating a sense of community among the participants;
>
> That the conceptualization and development of the proposed credit modules be developed through the collaboration of academic and student affairs personnel, organized into a Task Force, with Barry Heermann serving in a resource and development role to the Task Force.

Outcomes:

> An enriched academic program for students; a more holistic educational program which contains an integral interdisciplinary focus as students from varied educational programs undertake life/career/educational planning and personal analysis, sharing their unique vantage points;
>
> Promotion of higher rates of retention as compared with a control group of students not having the advantage of this educational service;
>
> The adaptation of formerly non-FTE-generating student services (where some attention has been given to holistic education) to the credit module;
>
> As a result of the greater cost-efficiency, the heightening of the quality of those services focused on affective development;
>
> A systematic delivery of pertinent learning services formerly not valued as academic 'turf.'

The proposal was accepted by the College administration based upon its unique concept and the rationale for inclusion of the courses in the Sinclair curriculum. The premise for developing the courses was simple:

meaningful planning of one's education depends upon a clear understanding of life and career goals. Research indicates that some confusion about these goals exists even with adults who have had considerable experience. Significant to this view is the fact that these persons lack an awareness of their uniqueness and potential. Therefore, the Education for Work/Life Actualization courses were based on the assumption that "...by heightening self-awareness of one's own unique possibilities and engaging in life/career planning, that decisions regarding program major and the resultant quality of learning experiences can be significantly strengthened" (p. 20).

Each one of the modules was designed to be highly experiential and interactive. Thus it is possible to have more immediate and varied evaluation. For example, provisions are made for student self-reflection, introspection, and self-assessment; students receive feedback from significant others outside of the classroom. The highly interactive quality of the modules allows for peer assessment and feedback. The modules are designed to provide for immediate and nonthreatening evaluation of student growth because the faculty facilitators also are owning and sharing their feelings and vulnerability with the class.

The six modules are described briefly below:

Life/Career Focusing I

The student will learn about life/career needs, values, interests, skills, and begin to realistic short- and long-term goals. Experience support and sharing with other students making important life/career decisions.

Life/Career Focusing II

Examine education and career opportunities and factors involved in decision making. Students reassess who, what, and where they are in their life/career process. Determine what actions are needed to create a regarding personal and work life.

Pathways to Creative Power

Students are introduced to a theory of creativity involving left and

right brain function. Emphasis is on creativity in work and personal life and examining barriers as well as pathways to creativity. Simulation, role playing, and demonstrating creativity are planned.

Creating Your Own Health and Well-Being

The student will learn how to take responsibility for his/her wellness and assess personal health attitudes and behaviors in order to make positive change to promote a healthful lifestyle. The student will design a personal health program including physical fitness, nutrition, and other health promoting activities.

Creating Rewarding Relationships

Identify and practice communication skills to improve interpersonal relationships. Develop good listening skills and consider ways to increase "respons-ability."

Creating Your Own Actualization

Learn about the impact of stress on health and well-being. Learn relaxation exercises and other coping strategies. Experience body and mind restfulness and centeredness through guided imagery and other class activities.

Research study tests rationale for courses

The significance of the investment by the College in Education for Work/Life Actualization is underscored by the decision to conduct a research study to determine what effect the holistic education courses would have upon the students. The study would have implications for further development of holistic education at Sinclair. The Task Force saw another implication, that of a possible effect upon student retention. With the purpose of the courses being to help students develop insights into attitudes and behaviors in pursuit of life and career planning, it was theorized that such insight might help to create a better "fit" between them and the College or a result of fostering self-awareness and providing alternatives for planning.

Methodology

The subjects chosen for the study were adult students enrolled at Sinclair Community College in the 1980-1981 academic year. The names of five hundred part-time students who represented the six academic division of the College were computer-selected. They were stratified by division percentage to assure a statistically-sound random sample of the College population by division and representing a 95% confidence level (.05 level). All students were contacted by mail asking them to participate by enrolling in two of the six classes for winter quarter 1981. A description of the classes was included in the letter along with a return post card to indicate interest. Sixty-five students responded and all were selected for the study.

The age range was thirty-five to fifty-five year old male and female students enrolled part-time at Sinclair as of September 1979 and still current. The reason for using this age group was the belief that they would benefit more from these courses than would younger students because of the uniqueness of the curriculum design. These adults were perceived as pursuing a career and having a family and other important life responsibilities. The course designs focus upon specific developmental tasks of the adult years (Lindquist and Clark, undated). These tasks are described as Mid-Life Transition (35 to 45): adapting to a changing time perspective, revising career plans, and redefining family relationships; Middle Adulthood (45 to 57): maintaining a career or developing a new one, restabilizing family relationships, achieving mature civic responsibilities, adjusting to biological change.

Credit hour parameters

Because part-time students were the chosen target, the parameter for the computer-selected names was set at twelve credit hours, as Sinclair defines full-time students as those persons enrolling for more than twelve credit hours per quarter. Older students typically are part-time students, with the most common being older female students. It was important to be able to track the students for one year, the time set for the study. Therefore, it was essential to choose those subjects who were far enough

away from graduation to be considered "safe" for the study. Associate degree programs at Sinclair require between ninety and one hundred credit hours, so forty credit hours was chosen as the cutoff point; an arbitrary figure, but one low enough to provide continuity and to control for experimental mortality.

The control group

Some compromise had to be made in the selection of the control group to approximate the conditions of treatment as closely as possible. Mail questionnaires were considered, but were dismissed as introducing more bias into the experiment than using intact classroom groups. Because the questionnaire was to be administered to the treatment group in a classroom, it was felt that controlling for history, maturation, testing, instrumentation, and experimental mortality was more possible with a control group with a similar environment. Both experimental and control groups were "volunteers" in that each chose to put him or herself into the classroom. The experimental group was told about a series of new courses at Sinclair, but not about the pending experiment. The control likewise "volunteered" to put themselves into a classroom, but simply out of need to fulfill a degree requirement. Thus the control group was "random in effect" (Lord, 1967) because it was nonassigned attendance and the composition of the classes was not manipulated by the experimenter.

Obviously, there is suspicion of selection bias affecting internal validity. In general, random in effect will control for this. The problem, however, mandated the use of a pretest to demonstrate initial equivalence of the intact group on the dependent variable (Tuckman, 1978). The process is for the researcher to compare the two groups on pretest scores (0_1 vs. 0_3) for significant differences and on scores on any control variable appropriate to selection, such as sex, age, and so on. The pretest is used as a base line measure, beyond true random assignment, to control for selection skew. In this design, a pretest is used with both groups.

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The research design

The design chosen for this study is the one favored by Campbell and Stanley in Experimental and Quasi-Experimental Designs for Research (1963):

$R\ O_1\ X\ O_2$

$R\ O_3\ X\ O_4$

Data gathering

The decision was made to use a questionnaire instead of an interview because of time and expense factors. The questionnaire was developed around structured scales scores of statement rather than questions. The statements were formulated by a three-person committee which included the researcher. They were evaluated by a jury of six Sinclair faculty, three of whom were members of the Holistic Education Task Force and familiar with the course objectives. Each member of the jury reviewed the statements and reported in writing his or her reaction to the clarity, diction, cogency, common sense, and relevance to the course objectives. The questionnaire statements were keyed to a Likert scaled response mode:

A: strongly agree

B: agree

C: undecided

D: disagree

E: strongly disagree

Subjects answered the questionnaires on a machine-scored answer sheet designed for rostering and computer analysis. Statements were written in both positive and negative direction to avoid response bias. On the posttest questionnaire, the order of the statements was changed from the pretest to avoid response bias.

Data analysis

In analyzing the data for this research project, two parametric statistical tests were used initially: the analysis of covariance and the "t"

at the .05 level. Campbell and Stanley (1963) state that these two tests are the most widely used acceptable tests for the type of experimental design used in this research. The t-test was used to identify significantly different responses both within and between the experimental and control groups. Analysis of covariance provides randomized blocking or leveling on pretest scores with pretest scores as the covariate.

Results

Analysis of covariance and t-tests failed to show significance at the .05 level and it is concluded by these tests that the difference in mean scores was due to chance and not to the intervention. At the traditional level of significance, the statistical findings show that students' attitudes concerning personal growth related to the course objectives did not change.

However, a comparison of unadjusted mean scores reveals an interesting shift which, though held insignificant by the F and t scores, possibly explained by the small sample number, does indicate some positive change in the "appropriate" scoring direction (left or right skew as previously explained) between pre- and posttesting.

The shift in the mean scores of individual questions which show changes in students' answers pre- and posttesting, does indicate something calling for further investigation. For example, when given a choice of five answers: A) strongly agree; B) agree; C) undecided; D) disagree; E) strongly disagree to a question on health and nutrition such as "The major diet-related problem is this country is the combination of overconsumption and undernutrition," and pre/posttest scores show a shift to the left on the scale from pretest 4.14 to posttest 1.52, there is little question of a change in attitude on the part of these students as a result of the intervention (see Table A).

Table A

Course: PSY 154 Creating Your Own Health and Well-Being

	RESPONSES						
	Item	A	B	C	D	E	Weighted Mean
Pretest	2	0	3	0	14	10	4.14
Posttest	2	15	9	0	0	1	1.52

Note: there are two less students in the posttest group

Students also provided a written evaluation of the courses and some excerpts are included here to indicate the sense of community they experienced. It is interesting to note that after the completion of the first pair of courses in November of 1981, the experimental group decided to have a party to celebrate the formation of new friendships. These students get together periodically to nurture their friendships and to continue to develop the kind of open relationships fostered by the holistic education courses.

Some comments about the courses from student narrative evaluations:

1. The things I liked best about this course:

"The intercommunication with other people was rewarding. The opportunity to 'share' and 'reflect' was revealing. The teacher was 'terrific' and easy to love."

"I got to see that I have feelings and should be a person."

"Sharing openness. Learning new skills of communication."

"Sharing feelings and learning from others. I am more comfortable now in sharing what I feel."

2. The things I liked least about this course:

"There didn't seem to be enough time to really get to know everyone."

"It didn't last long enough."

"It only lasted four weeks - for once I would have liked a more lengthy session and I'm always complaining that the courses (I take) could be condensed to 4 to 5 weeks."

"Not enough time; felt we just barely touched on many subjects which could have been more beneficial with further expansion of ideas and sharing."

"Too short. Not enough personal communication."

3. If I were going to tell a friend about this course, I would say:

"You'll love it. It is 2½ hours that you can set aside for your own personal 'reflections.' It'll help you grow"

"(The teacher) made me think about myself. Hopefully I will be more aware of the 'me' I have locked inside. Thank you!"

"If you want to get in touch with yourself, sign up. It's great."

"Take it!"

"You will find rewards in learning from other people and have a new self-awareness."

"If you're interested in growing and self-improvement, take it."

"That in the process of change, or otherwise, it's a worthwhile course to take providing one 'operates' on a thinking and feeling level in life. For those who do not, they may have difficulty 'getting into' the process."

"I have several friends also taking courses at Sinclair who did not receive info on these courses and would have benefited from these. Hope this series will be continued."

"I have advised my mother to take these courses because she is very interested in people but feels she does not have the ability to get out and be with others."

4. Three things I learned about myself were:

"I'm not as confused as I thought; I want to be a leader; I have to be liked."

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"It really is possible to think seriously of life changes; It's hard to take risks; Getting to know others here has shown how others have done many of these risk-taking opportunities and made them interesting rather than fearful."

"I need to pinpoint more about where I am going; That I have opened up to people more; That I am not happy about my job."

"I confirmed that I am going in the right direction; You're not alone; Life is too short - live while you have it."

"That I love to learn; That I have choice in choosing a career; That I have more interests and skills than I thought."

"What my real goals are; The reasons for my goals are OK; I'm more anxious than I thought."

"I definitely want to make a job change; I need to set goals and follow though; I need to overcome fear."

"I find it easier to explain my values; I learned why my values have changed; I have a better understanding of my life goals."

"I'm worse at decision-making than I thought; I'm realizing more of my skills as time goes by; It's hard for me to limit my goals."

5. What I need to do for myself next is:

"Make a decision about my future."

"Reach out more. Try to break my routine and learn to do and enjoy leisure time."

"To take more psychology courses."

"Collect more information as to the requirements about my career goals. Finding out if my two choices are really workable."

"Get organized. Get professional advice. Overcome anxieties."

"Continue research - set goals and follow through."

"To apply the new knowledge I have gained to make my life more enjoyable.

"Improve my self-confidence."

"Get my head together."

"Get my life in order. Learn to relax."

"In our first class we set some goals. I've finally accepted my mother for who she is, not how she was when I was a child."

"Take more risks."

Conclusions

These comments, drawn from course evaluations, sample the intangibles of a group experience which are impossible to quantify. Every one of the faculty involved with the holistic education courses report similar comments from their students before, during, and after classes. They also emphasized the strong sense of community which developed. As reported earlier in this study, many of these students still continue to develop these relationships with each other. So it is difficult to conclude that test scores should be the only basis for evaluating the success of the program. Also, it is difficult to quantify success in attitude surveys which, by their definition, imply the absence of right or wrong answers, looking instead for gradients. Success is relative to where the students begin in a course of this kind and where they are when it ends.

Because of these factors, it is necessary to add a descriptive analysis to point out areas of success which are not warranted by the results of statistical testing, but which are broadly suspected by looking at mean comparisons and which, to some degree, are confirmed by student comments.

Some specific examples of mean comparisons which indicate attitudinal change are indicated below.

PSY 151 - Life and Career Focusing II: Of the fifteen questions on the pre- and posttest questionnaire, twelve showed a change in the "correct" direction (either left or right skew as previously described). The weighted mean for these questions on the five-part Likert scale was 3.00. Pretest scores (means) for the ten positively-skewed questions averaged 2.92; posttest scores averaged 2.55, indicating a decrease of .37 in the correct direction. Pretest scores for the two negatively-skewed questions averaged 2.38; posttest scores averaged 2.69, an increase of .31 in the correct direction. Three questions showed a change in the wrong

direction, indicating an attitude which did not improve as a result of the treatment.

The Experimental and Control tables which follow show results of all six of the questionnaires.

The attrition over the year's study produced a startling drop in the sample numbers as described previously in this study. In an attempt to deal with this, a chi-square test was used to test for significance with these very small numbers. Such significance was found in most cases and is shown in the tables to follow.

The results of chi-square show that most of the posttest scores for both the experimental and the control groups, the movement was more consistent and in slightly higher amounts. In a study lasting for one year, maturation will account for some change which is extremely difficult to quantify. The natural chain of events in one's life will affect attitude. Along with experiment mortality, which is discussed in the paragraph to follow, maturation is a recognized weakness of this study. However, in this study, the specific intervention with the experimental group seemed to accelerate the general trend toward significant change; whereas in the control group, the change was quantatively less.

EXPERIMENTAL

COURSE	QUESTIONS	PRE-TEST	POST-TEST	CHANGE
Psy 151	<- 10 positive	2.92	2.55	-.37
15 questions	-> 2 negative	2.38	2.69	+.31
	3 no improvement	-	-	-
Psy 152	<- 8 positive	2.17	1.97	-.20
15 questions	-> 4 negative	3.18	3.46	+.31
	3 no improvement	-	-	-
Psy 153	<- 9 positive	2.67	2.49	-.18
14 questions	-> 1 negative	3.40	3.56	+.16
	4 no improvement	-	-	-
Psy 154	<- 14 positive	2.18	1.65	-.53
14 questions	-> 3 negative	3.52	3.73	-.21
	1 no improvement	-	-	-
Psy 155	<- 6 positive	2.12	1.76	-.36
15 questions	-> 4 negative	3.32	3.52	+.20
	5 no improvement	-	-	-
Psy 156	<- 2 postive	2.64	2.57	-.07
18 questions	-> 9 negative	2.62	2.84	+.22
	7 no improvement	-	-	-

* The weighted mean for all questions was 3.00 on the five-part Likert Scale.
* Positive-direction questions should decrease in number to show significance.
* Negative-direction questions should increase in number to show significance.

CONTROL

COURSE	QUESTIONS	PRE-TEST	POST-TEST	CHANGE
Psy 151	<- 10 positive	2.59	2.26	-.33
15 questions	-> 2 negative	3.08	3.24	+.16
	3 no improvement	-	-	-
Psy 152	<- 7 positive	2.26	1.87	-.33
15 questions	-> 1 negative	3.55	3.60	+.05
	7 no improvement	-	-	-
Psy 153	<- 8 positive	2.22	2.05	-.17
14 questions	-> 1 negative	3.47	3.54	+.07
	5 no improvement	-	-	-
Psy 154	<- 3 positive	2.84	2.51	-.33
14 questions	-> 3 negative	3.31	3.36	-.05
	12 no improvement	-	-	-
Psy 155	<- 8 positive	2.33	2.11	-.22
15 questions	-> 3 negative	3.01	2.84	+.17
	4 no improvement	-	-	-
Psy 156	<- 2 positive	2.76	2.93	-.17
18 questions	-> 9 negative	2.85	3.09	+.24
	7 no improvement	-	-	-

* The weighted mean for all questions was 3.00 on the five-part Likert Scale.
* Positive-direction questions should decrease in number to show significance.
* Negative-direction questions should increase in number to show significance.

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CHI-SQUARE

Course PSY 151

EXPERIMENTAL

	Above	Below
Pre	278	269
Post	330	155

Shift to left

Chi-square: 30.7801
df: 1
Significance level: 0.000

CONTROL

	Above	Below
Pre	191	95
Post	158	25

Shift to left

Chi-square: 21.399
df: 1
Significance level: 0.00000

****

	Above	Below
Pre	135	269
Post	122	50

Shift to right

Chi-square: 67.98
df: 1
Significance level: 0.000

	Above	Below
Pre	50	50
Post	17	80

Shift to right

Chi-square: 21.712
df: 1
Significance level: 0.00000

Significance levels
.05 = 3.84
.02 = 5.41
.01 = 6.64

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CHI-SQUARE

Course PSY 152

EXPERIMENTAL

	Above	Below
Pre	231	53
Post	136	144

Shift to left

Chi-square: 65.168
df: 1
Significance level: 0.000

CONTROL

	Above	Below
Pre	181	56
Post	105	71

Shift to left

Chi-square: 12.474
df: 1
Significance level: 0.00041

****

	Above	Below
Pre	44	102
Post	136	10

Shift to right

Chi-square: 119.943
df: 1
Significance level: 0.000

	Above	Below
Pre	76	28
Post	99	6

Shift to right

Chi-square: 15.732
df: 1
Significance level: 0.00007

Significance levels
.05 = 3.84
.02 = 5.41
.01 = 6.64

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CHI-SQUARE

Course PSY 153

EXPERIMENTAL

	Above	Below
Pre	148	29
Post	159	47

Shift to left

Chi-square: 2.088
df: 1
Significance level: 0.14848

CONTROL

	Above	Below
Pre	117	21
Post	68	24

Shift to left

Chi-square: 3.482
df: 1
Significance level: 0.06203

****

	Above	Below
Pre	15	72
Post	50	39

Shift to right

Chi-square: 26.991
df: 1
Significance level: 0.000

	Above	Below
Pre	12	46
Post	18	15

Shift to right

Chi-square: 9.431
df: 1
Significance level: 0.00213

Significance levels
.05 = 3.84
.02 = 5.41
.01 = 6.64

CHI-SQUARE

Course PSY 154

EXPERIMENTAL

	Above	Below
Pre	251	21
Post	179	94

Shift to left

Chi-square: 56.80
df: 1
Significance level: 0.00

CONTROL

	Above	Below
Pre	162	19
Post	70	40

Shift to left

Chi-square: 26.743
df: 1
Significance level: 0.000

****

	Above	Below
Pre	35	107
Post	113	24

Shift to right

Chi-square: 91.329
df: 1
Significance level: 0.0

	Above	Below
Pre	25	62
Post	44	14

Shift to right

Chi-square: 29.126
df: 1
Significance level: 0.00

Significance levels
.05 = 3.84
.02 = 5.41
.01 = 6.64

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CHI-SQUARE

Course PSY 155

EXPERIMENTAL

	Above	Below
Pre	443	98
Post	364	148

Shift to left

Chi-square: 16.513
df: 1
Significance level: 0.00005

CONTROL

	Above	Below
Pre	203	54
Post	163	54

Shift to left

Chi-square: 0.795
df: 1
Significance level: 0.37255

****

	Above	Below
Pre	108	137
Post	134	84

Shift to right

Chi-square: 13.289
df: 1
Significance level: 0.00027

	Above	Below
Pre	67	58
Post	71	27

Shift to right

Chi-square: 7.494
df: 1
Significance level: 0.00619

Significance levels
.05 = 3.84
.02 = 5.41
.01 = 6.64

CHI-SQUARE

Course PSY 156

	EXPERIMENTAL		CONTROL	
	Above	Below	Above	Below
Pre	51	8	31	9
Post	37	25	25	14
	Shift to left		Shift to left	
Chi-square:	9.610		1.130	
df:	1		1	
Significance level:	0.00194		0.28786	

****

	Above	Below	Above	Below
Pre	237	273	133	158
Post	246	231	127	163
	Shift to right		Shift to right	
Chi-square:	2.367		0.144	
df:	1		1	
Significance level:	0.12392		0.70407	

Significance levels
.05 = 3.84
.02 = 5.41
.01 = 6.64

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Weaknesses of the study

As has been pointed out previously, a serious weakness developed in this research over time which needs to be controlled in a future study of this type. Although at the beginning of the research the sample for the experimental groups was carefully and randomly selected and the control groups considered random in effect, this attention to detail was confounded by attrition. Experimental mortality, beyond the control of the researcher in this project, resulted in a continuing reduction in sample size - less serious in the experimental group - but which made it hard to deal with the requirements of the statistical test.

Questionnaires introduce a bias in any experiment. However, it is possible to control for this particular research design, but it is more difficult to do so when the questionnaire is based upon attitudes and deep personal feelings which respondents are not always "truthful" about in their answers.

Recommendations for further study

A need exists for further research in this area to provide a better understanding of how student attitudes are affected by courses in holistic higher education. Such courses are designed to help students learn about themselves and provide opportunities for improvement in self-concept and interpersonal skills. To reiterate, research indicates that self-concept controls what students learn and "that significant learning is always accompanied by emotion and feeling" (Combs 1981 p. 449). One purpose of the Sinclair courses is to provide students with an experience which helps them begin to find greater meaning and purpose in life by focusing upon the holistic life triangle: mind, body and spirit.

These personal development needs - which the Community College Goals Inventory (1979) indicates are areas of concern with college students who are unhappy about the attention given to them - can be met with courses specifically designed to orchestrate the realms of emotion, attitude, and value. Courses in holistic higher education which become a part of the traditional curriculum provide right-brain development to help balance the

preponderant overemphasis on cognitive learning.

The purpose of this research study was to try to determine whether there was "a significant and measurable difference in the attitudes of older adult students regarding self-image, values, and career goals..." (the author, p. 2). The formal tests of significance indicate no difference in mean scores as a result of the intervention. However, less rigorous and more subjective descriptive analysis based upon actual shifts in mean scores, plus many student narrative evaluations, indicates a correlation to change which bears further investigation with sample sizes large enough not to be confounded by experiment mortality.

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